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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/550,443	04/17/2000	Gordon Pack	081862.P174	1576

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EXAMINER

RICHEY, JAMES J

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/550,443

Applicant(s)

PACK ET AL.

Examiner

James J. Richey

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 4/17/2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/17/2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

a.) Figure 3 has reference 308 listed twice, but no mention of such a reference in the specification.

b.) Both Page 8, Line 5 & Page 8, Line 23 make reference to switch 405 in Figure 3. No such reference number exists in Figure 3.

c.) Page 10, Line 15 makes reference to 'telephones in system 20' in Figure 3. No such number exists in Figure 3.

d.) Drawing elements in Figures 1-3 need labels

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

a.) Page 8, Line 19 makes reference to workstation queue 206 in Figure 3. No such number exists in Figure 3, but instead should be reference 310.

b.) Page 10, Line 18 makes reference to telephone 201 located in Figure 3. No such number exists in Figure 3, but instead should be reference 307.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 & 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 3 & 8, both claims recite the limitation "wherein transmitting data".

There is insufficient antecedent basis for this limitation in the claim

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 6-8, & 11-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Varma, Patent Number 6,359,863

Regarding Claims 1, 6, & 11, Figure 9, lines 1-7, in Varma represent the pseudocode used in detecting and calculating the change of the available output bandwidth of a given line used in an ATM switch. Lines 8 & 9 in that same figure shows how the new bandwidth value,  $B_a$ , is applied to update the variable  $B_{eq}$ , which represents the new bandwidth of the channels assuming each will receive an equal portion of the available bandwidth.

Regarding Claims 2, 7, & 12, Figure 9, lines 5-7, represent the pseudocode used in Varma's invention for detecting and calculating the available bandwidth,  $B_a$ , of the outgoing lines in an ATM switch (col. 17, lines 13-61). Figure 5B, step 116 shows the new computation rate for the connection, while steps 118-122 show the new rate being fed back into the stream to be sent back to the source.

Regarding Claims 3, 8, & 13, Figure 5A in Varma discloses the steps used in allocating bandwidth for a given connection and step 106-112 checks to ensure that a minimum connection requirement (MCR) is met. This ensures that no matter what the outgoing bandwidth is, certain connections will always maintain be granted a specific transmission rate (col. 15, lines 1-63).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 16 & 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Soumiya, Patent Number 5,696,764.

Regarding Claim 16, Figure 7 in Soumiya discloses the workings of an ATM switch that connects various input sources (Input Links #1-N) to various output destinations (Output Links #1-N). Inside this switch, resides a Quality of Service Controller (70) and a Shared Buffer (62).

Regarding Claim 17, Figure 8 in Soumiya discloses the workings of the Quality of Service Controller (70). Inside said controller resides Threshold Calculator (71h) and Non-Bandwidth Guaranteed Cell Discarder Controller (71i), which function to inhibit the flow of non-

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bandwidth guaranteed cells through the switch (col. 19, lines 40-67; col. 20, Lines 1-15).

Likewise, Selectors (71k & 71m) and Scheduling Table (71j) function as the cell selecting portion of the device (col. 20, lines 16-39). Finally, within the Quality of Service Controller (70), resides a processor (not shown in any of the figures), which performs the calculations and various operations of the device (col. 21, lines 12-26).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4-5, 9-10, & 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varma as applied to claims 1-3, 6-8, & 11-13 above, and further in view of Soumiya.

Regarding Claims 4-5, 9-10, & 14-15, Varma discloses a method for handling cells in an ATM switch that includes the monitoring of the available output bandwidth and changing the input rates if fluctuations should occur. However, it does not specifically mention prioritizing one set of cells over another in both the queuing and selecting of said cells.

In Soumiya's disclosure of the ATM switch, it is mentioned that the incoming cells are given quality class numbers and are sorted in the queue according to these numbers. Bandwidth guaranteed connections are assigned a better quality class than those on non-bandwidth

guaranteed connections. Accordingly, the cell scheduler selects cells with higher quality class and is able to maintain a predetermined QoS for specific connections (col. 28, lines 9-43).

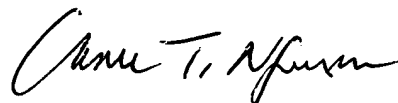
By combining Soumiya complete design with Varma's monitoring and handling of the output bandwidth, the result would be that of the current application. It would have been obvious to one skilled in the art at the time the invention was made to combine these two inventions in order to more fully maintain the optimal function of an ATM switch and to reduce potential congestion in both short and long term.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Richey whose telephone number is (703) 305-4682. The examiner can normally be reached on M-F: 8:30am-6pm, Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

JR.  
JR



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